

I claim:

1. A power assisted hand truck, comprising:

a generally vertically oriented rigid frame having a top end, a bottom end, a front load receiving side, and a rear side;

- 5 a load bearing member joined to the front load receiving side of the frame;

a pair of hand truck wheels rotatably joined laterally towards the bottom end of the frame such that the frame can be rolled about; and

- 10 a motor rigidly joined to the frame, the motor being configured to rotate a power assistance wheel that is rotatably joined to the frame towards the bottom end of the back side such that power assisted translational motion is imparted to the frame when both the motor and the power assistance wheel are engaged.

2. The power assisted hand truck of claim 1 wherein the power assistance wheel is generally centered between the pair of hand truck wheels such that load balancing stability is improved.

- 15 3. The power assisted hand truck of claim 1 wherein the motor is configured to rotate the power assistance wheel by driving a gearbox, which gearbox is configured to transmit rotational motion from the motor to a power assistance axle that is joined to the power assistance wheel such that rotational motion is imparted to the power assistance wheel when the motor is engaged.

- 20 4. The power assisted hand truck of claim 1, further comprising a power assistance wheel axle that is rigidly joined to the frame and rotatably joined to the power assistance wheel, whereby the motor is a hub motor configured to directly rotate the power assistance wheel about the power assistance wheel axle such that rotational motion is imparted to the power assistance wheel when the motor is engaged.
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5. The power assisted hand truck of claim 4, wherein the hub motor comprises a built-in mechanical brake.

6. The power assisted hand truck of claim 1, wherein the motor is an electric motor configured to receive power from a battery, whereby said power assisted hand truck further comprises said battery.
- 5 7. The power assisted hand truck of claim 6, further comprising a motor control module that is configured to control the rotational motion imparted to the power assistance wheel by the electric motor, the motor control module being further configured to both receive a rotational motion command from a user and deliver the necessary signals to the electric motor to rotate the power assistance wheel substantially corresponding to the rotational motion command.
- 10 8. The power assisted hand truck of claim 7, wherein the rotational motion command essentially corresponds to a variable or fixed rotational speed of the power assistance wheel in the forward or reverse rotational directions.
- 15 9. The power assisted hand truck of claim 1, wherein the power assistance wheel is configured such that it engages the ground when the power assisted hand truck is pivotally tilted in the rear direction at a certain tilt engagement angle.
10. The power assisted hand truck of claim 9, wherein the tilt engagement angle is approximately 45 degrees on level ground.
11. A power assisted hand truck, comprising:
- 20 a generally vertically oriented rigid frame having a top end, a bottom end, a front load receiving side, and a rear side;
- a load bearing member joined to the front load receiving side of the frame;
- a pair of hand truck wheels rotatably joined laterally towards the bottom end of the frame such that the frame can be rolled about; and
- 25 rotational means to rotate a power assistance wheel means such that translational motion is imparted to the frame when both the rotational means and the power assistance wheel means are engaged.